



GOVERNMENT OF INDIA.

DEPARTMENT OF EDUCATION, HEALTH AND LANDS.

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(Fifth) Report showing the progress made in giving effect to the recommendations of the Royal Commission on Agriculture in India up to the end of 1935.

PART I.—CENTRAL GOVERNMENT.

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## PART I.—Central Government.

**Statement Showing the action taken by the Government of India, upto the end of 1935, on the recommendations of the Royal Commission on Agriculture in India with which they are concerned.**

### CHAPTER III.—Organisation of Agricultural Research.

#### 1. Constitution of Council of Agricultural Research. (*Recommendations 1 to 17 and 19—paragraphs 40—55 and 57-58.*)

*Recommendations 1, 2 and 3. Closer liaison between Pusa and Provincial Agricultural Departments.*—The establishment of the Imperial Council of Agricultural Research in 1929 has enabled Pusa to be brought into closer touch with the Provincial Departments of Agriculture and the latter with each other. The transfer of the Pusa Institute to Delhi will be a further improvement.

*Recommendation 4. Establishment of the Imperial Council of Agricultural Research.*—The Council was established by Government of India Resolution No. 826-Agri. of 23rd May 1929 and registered as a Society with the following principal objects:—

- (a) to aid, develop and co-ordinate agricultural and veterinary research in India by promoting scientific (including technological research, instruction and experiments in the science), methods and practice of agriculture (including the marketing of agricultural produce) and by promoting veterinary research and instruction in veterinary science, by the diffusion of useful information and by such other means as appear calculated to develop agricultural and veterinary research.
- (b) to act as a clearing house of information not only in regard to research but also in regard to agricultural and veterinary matters generally.
- (c) for the purposes of the Society to draw and accept and make and endorse, discount and negotiate Government of India and other promissory notes, bills of exchange, cheques or other negotiable instruments.

*Recommendation 5. Financing of the Imperial Council of Agricultural Research.*—The Imperial Council of Agricultural Research was given an initial research grant of 25 lakhs and an annual research grant of 5 lakhs. The cost of the Secretariat of the Council (including the salaries of Vice-Chairman, Expert Advisers and Secretary) is also met by Government. Additional grants have been made to the Council for sugar research and for provincial marketing staff.

(*Statement showing grants made by the Government of India to the Imperial Council of Agricultural Research*):—

	Rs.
(1) Non-recurring initial lump sum grant.. .. .	25,00,000
(2) Grant for research work at Rs. 5 lakhs per annum from 1930-31 to 1936-37	35,00,000
(3) Special grant for urgent agricultural (including animal husbandry) schemes	10,53,000
(4) Grant for sugar research .. .. .	20,33,000
(5) All-India sugar research Institute (five years) .. .. .	15,38,000
(6) Grant for Provincial Marketing schemes .. .. .	10,00,000
(7) Office of the Agricultural Marketing Adviser to the Government of India (5 years) at Rs. 2,50,000 per annum (average) .. .. .	12,50,000
Total	1,34,74,000

CHAPTER III.—Organisation of Agricultural Research—*contd.*(8) *Administration of the Imperial Council of Agricultural Research Department*

								Rs.	1
1929-30	..	..	..	..	..	..	..	1,34,000	
1930-31	..	..	..	..	..	..	..	2,38,000	
1931-32	..	..	..	..	..	..	..	2,26,000	
1932-33	..	..	..	..	..	..	..	1,96,000	
1933-34	..	..	..	..	..	..	..	2,21,000	
1934-35	..	..	..	..	..	..	..	2,29,000	
1935-36	..	..	..	..	..	..	..	2,50,000	
1936-37	..	..	..	..	..	..	..	3,09,000	
Total							..	18,03,000	18,03,000
Grand total							..	1,62,77,000	
or Rs. 1,63,00,000 (round).									

The Government of India have also provided for the central marketing staff and the central research institute for sugar technology as attached and sub-offices respectively under the Imperial Council of Agricultural Research Department.

*Recommendation 6. Training of research workers.*—The Imperial Council of Agricultural Research has not yet instituted any system of scholarships for the higher training of research workers, as it was the view of the Advisory Board and Governing Body that having regard to the number of scholarships given by other organisations for higher training abroad the Councils funds should, for the present, be devoted to actual research. It has, however, arranged for higher training and research in special branches of science of six workers for special posts, viz :—

Dairy Technology	..	..	..	..	..	..	..	..	1
Virus Diseases of Plants	..	..	..	..	..	..	..	..	1
Cytology	..	..	..	..	..	..	..	..	1
Soil microbiology	..	..	..	..	..	..	..	..	1
Physiology of fruit trees	..	..	..	..	..	..	..	..	1
Insect pests	..	..	..	..	..	..	..	..	1

It has also made a grant to the Calcutta University for special post-graduate training in statistics. It may be added that the research schemes at present financed by the Council employ 256 research workers and assistants so that the number of science and agricultural graduates receiving training in research methods is large.

*Recommendation 7. Council as a clearing house of information.*—This recommendation has been acted upon on a very limited scale as financial stringency has prevented the appointment of technical assistants to the Agricultural and the Animal Husbandry Experts to the Imperial Council of Agricultural Research. The Council has allotted part of its research grant to statistical work in this connection and the nucleus of an Animal Husbandry Bureau, has been established and a small Locust Intelligence Bureau maintained. The work of the Sugar Bureau, Pusa, has been transferred to the Sugar Technologist to the Council and has been considerably expanded.

### CHAPTER III.—Organisation of Agricultural Research—*contd.*

*Recommendation 8. Publication work.*—The publication work formerly done by the Imperial Institute of Agricultural Research, Pusa, was taken over by the Council in January 1931 and the following publications are now issued :—

- (1) The Indian Journal of Agricultural Science (Bi-monthly);
- (2) The Indian Journal of Veterinary Science and Animal Husbandry (Quarterly);
- (3) Agricultural and Livestock in India (Bi-monthly);
- (4) The Review of Agricultural Operations in India (Biennially);
- (5) Scientific monographs of the Imperial Council of Agricultural Research;
- (6) Miscellaneous bulletins of the Imperial Council of Agricultural Research; and
- (7) Catalogue of Indian insects.

*Recommendation 9. Sectional meetings of Experts in the various branches of Agricultural and Veterinary Science.*—The Board of Agriculture and Animal Husbandry in India has been divided into two wings dealing respectively with (a) Crops and Soils and (b) Animal Health and Animal Husbandry. A meeting of Animal Husbandry Research Workers and others interested was held in February 1936. The various standing and *ad hoc* Committees of the Advisory Board of the Imperial Council of Agricultural Research bring together many research workers both from the Agricultural Departments and Universities. The Council has also assisted in the formation of an Indian Society of Soil Science.

*Recommendation 10. Grants by the Council for Research.*—Grants from the funds of the Council for research work are being made as recommended.

*Recommendation 11. Alteration of Devolution Rules to permit of the development of Agricultural Research by a Central authority.*—On examination this proved unnecessary. In practice grants are made to the Imperial Council of Agricultural Research which is a registered Society.

*Recommendations 12 to 17. Constitution of the Council and its whole-time officers.*—These recommendations have been accepted and acted upon. The Imperial Council of Agricultural Research which was brought into existence as a consequence has, however, a somewhat different constitution to the one recommended, as it was found expedient to set up a separate Advisory Board to deal with Scientific and Technical matters and a Governing Body (mainly composed of Ministers of Agriculture and Representatives of the Central Legislature) to deal with questions of policy and finance.

*Recommendations 19. Abolition of the post of Agricultural Adviser to the Government of India.*—The post of Agricultural Adviser to the Government of India has been abolished and the advisory duties of this post have been taken over by the Vice-Chairman, Imperial Council of Agricultural Research and his two expert colleagues.

#### 2. Appointment of a whole-time Director for the Imperial Institute of Agricultural Research, Pusa. (Recommendations 20 and 21—paragraphs 58-59.)

These recommendations were accepted and the Secretary of State was asked to recruit a suitable candidate for the post. Dr. B. A. Keen, of the Rothamsted Experimental Station, who was appointed by him as Director on a year's contract in the first instance, joined the post in November 1930. Since the termination of his contract the post has been held by I. A. S. officers except from October 1935 since when an officer of General Central Service Class I, has been holding it in an officiating capacity. On Dr. Keen's advice it was decided that the Director should take an active part in research and that his duties should be combined with the headship of a Section. This arrangement is under re-consideration.

### CHAPTER III.—Organisation of Agricultural Research—*contd.*

#### 3. *Expansion of the Pusa Institute as an educational centre. (Recommendation 22—paragraph 60.)*

A preliminary examination of the question was made by the Government of India in 1929 and the local Governments were informed that the Government of India had accepted the view of the Commission and were willing to take the necessary action to provide all the facilities possible for higher agricultural training at Pusa as rapidly as financial conditions permitted, but that, as a preliminary to a decision as to the additional facilities which were required, it was essential that local Governments should come to a decision on the policy they wished to adopt in regard to recruitment to their new Superior Provincial Agricultural Services. The majority of the local Governments expressed their inability to undertake that the completion of a post-graduate course at Pusa would be an essential qualification for their superior provincial agricultural services and only a few of them could give an indication of the number of men whom they would wish to have trained annually.

The Government of India accepted the recommendations of the Royal Commission on Agriculture in India to make the Pusa Institute a centre for post-graduate training and to provide necessary facilities as rapidly as financial conditions permitted. They sought the advice of the Imperial Council of Agricultural Research, and the Advisory Board of the Council, in January 1931, adopted the following general Resolution on the subject :—

“ That Pusa should continue to be developed actively and to the greatest possible extent as an Institute for fundamental research. If facilities for post-graduate training analogous to those provided at present are then offered, it will attract research students in proportion to its success as a research centre ”.

The Board also made the following recommendations :—

- (a) that the provision of facilities for research work and for acquiring a knowledge of modern research methods and technique is all-important and involves a certain amount of definite but not formal instruction ;
- (b) that there is need for a special post-graduate course, of an original nature, for Assistant and Deputy Directors of Agriculture and that in some cases it will be desirable to give a refresher course in the various branches of agricultural science in order to assist students coming from a Provincial Department of Agriculture, who having left the University or the Agricultural College several years previously are not acquainted with the recent advances in pure science ;
- (c) that for university students seeking admission to the post-graduate courses it should ordinarily be insisted upon that they should hold the highest degree in science, short of a Doctor's degree, awarded by their University and that for agricultural graduates a first-class or a high position in the college gradation list should be demanded ;
- (d) that entry to the post-graduate courses should not be confined to men already in Government service but should be open to private students ; and
- (e) that in each province there should be a selection committee, on which due representation should be given to universities and that the recommendations of such selection committees should be placed before a selection committee at Pusa, which should have the final voice in the selection of students. The Pusa authorities should have power to admit students who have not gone before a provincial selection committee but who, in their opinion, are suitable for a post-graduate course.

The recommendations of the Advisory Board of the Council have been accepted by the Government of India, except that in regard to recommendation (c) it was considered that candidates possessing the B. Sc. degree with honours should also be eligible for selection for post-graduate training.

### CHAPTER III.—Organisation of Agricultural Research—*contd.*

#### *A. Part to be played by Indian Universities in Agricultural development. (Recommendations 24-25—paragraph 62.)*

The Inter-University Board continued to keep in touch with the Imperial Council of Agricultural Research. There are four representatives of Indian Universities elected by the Inter-University Board on the Advisory Board of the Council, one on the Council's Editorial Committee and 15 on other committees. The co-operation of the universities in agricultural research under the aegis of the Imperial Council of Agricultural Research has continued to develop and by the end of the year 1935 research grants aggregating Rs. 4,69,000 had been sanctioned to 7 universities for 15 schemes.

#### *5. Internal co-ordination and cooperation in Research Institutes. (Recommendation 26—paragraph 64.)*

Dr. B. A. Keen, late Director of the Pusa Institute, was of the opinion that under the present system of organisation of the Institute no advantage was to be gained by following the Rothamsted system. The recommendation will, however, be reconsidered as soon as the Institute is in working order at New Delhi, its new site.

#### *6. Constitution of a Central Jute Committee. (Recommendations 28-29—paragraph 65.)*

Government have accepted the recommendation in favour of the constitution of a Central Jute Committee.

The Vice-Chairman of the Imperial Council of Agricultural Research will be *ex-officio* president of the Committee which will be financed for the time being by grants from Central revenues. The grants, which will not exceed Rs. 5 lakhs in any year, will be made each year only to the extent that they can profitably be spent in the year and will naturally depend upon the financial position of the Government of India at the time. The position will however be reviewed after five years or earlier if necessary.

#### *7. Establishment of additional Sub-Stations to the Pusa Institute. (Recommendation 30—paragraph 66.)*

In addition to the sub-stations (Botanical and Sugarcane) at Karnal the following sugarcane experiment stations, financed by grants made by the Imperial Council of Agricultural Research, are now in operation :—

Dacca (Bengal); Mushari (Muzaffarpur—Bihar); Shahjahanpur and Muzaffarnagar (United Provinces); Jullundur and Lyallpur (Punjab); Padegnon (Bombay-Deccan); Anakapalle and Gudiyattam (Madras); Jorhat (Assam) and Mysore. Similar Sugarcane Research Stations are also to be opened shortly in the North West Frontier Province and Baroda out of the grants made by the Imperial Council of Agricultural Research. These stations enable the productions of the Imperial Sugarcane breeding station at Coimbatore (itself a branch of the Imperial Institute of Agricultural Research) to be thoroughly tested throughout India and the actual selections made under local conditions.

#### *8. Continuance of the Board of Agriculture. (Recommendation 31—paragraph 67.)*

The Board of Agriculture has been reconstituted as the "Board of Agriculture and Animal Husbandry" and divided into two wings, dealing respectively with Crops and Soils, and Animal Health and Animal Husbandry. It was the intention that each wing should meet biennially—meetings being arranged in alternate years, but owing to financial stringency, meetings have been less frequent.



### CHAPTER III.—Organisation of Agricultural Research—*concl'd.*

The last meeting of the old Board was held at Pusa in December 1929, the first meeting of the Animal Husbandry wing was held in February 1933 and that of the Crops and Soils wing in February 1935. The next meeting of the Animal Husbandry wing will take place in December 1936.

### CHAPTER IV.—Agricultural Improvement.

#### 9. *Conservation of Fertilisers and investigation of certain problems cultivation. (Recommendations 30, 31, 35, 36, 38, 68, 73 and 79—paragraphs 87, 91, 92, 94, 108, 112 and 115.)*

*Recommendations 30, 31, 35 and 36. Restriction of the export and development of the use of indigenous fertilisers.*—The Government of India have accepted the view of the Commission that no case can be made out for the imposition of an export tax on oil-seeds, oil-cakes, bones, bone-meal, fish manures and natural phosphates or for the prohibition of the export of these products. Local Governments were informed accordingly and asked to take early steps (a) to investigate the possibilities of extending the oil-crushing industry, and, in particular, to examine the question how far its development can be promoted by Government assistance in the matter of overcoming difficulties of transport and in the form of technological advice in regard to improved methods of manufacture and standardisation, (b) to investigate the economics of the bone-crushing industry, and (c) to investigate the extent to which fish manures could be profitably used for Indian agriculture and the price obtained for them in the export market.

The replies received from the local Governments were passed on to the Imperial Council of Agricultural Research which appointed two committees, viz., (1) Fertiliser Committee for the investigation of problems relating to the conservation of indigenous manurial resources, the development of the use of indigenous fertilisers and the preparation of a programme of research on fertilisers, and (2) Oil-crushing Industry Committee to deal with the question of developing the oil-seed industry. The Fertilisers Committee met for the first time in June 1930 and organised the compilation and examination of previous fertiliser experiments throughout India. At its second meeting in February 1931 the Committee considered the results collected, arranged for their publication and drew up a general programme of fertiliser experiments to be conducted on modern lines. The Indian Oil-Crushing Industry Committee met twice in 1931 and again in 1933. A number of matters connected with the development of the oil-crushing industry were considered and the co-operation of provincial departments of industry sought.

The Imperial Council of Agricultural Research has given a grant of Rs. 30,000 per annum for three years to the Hareourt Butler Technological Institute to assist their oil-technology section. It has disseminated information regarding faults in Indian oilseeds and vegetable oils. With the establishment of the Industrial Research Bureau (under the Industries and Labour Department of the Government of India) the question of developing research in vegetable oil technology has been transferred to that body.

The Council has also assisted in the collection of data regarding the bone-crushing industry, in the design of a small power drawn bone-crusher (by a prize) and in experiments on the solubilisation of bones by simple methods. The results of the latter have been published.

*Recommendation 38. Legislation against adulteration of fertilisers.*—The position is now being re-examined.

*Recommendation 68. Investigation into the economics of power cultivation in the Central Provinces with a view to the possibility of reclaiming areas infested with kank grass.*—This has been carried out in the Central Provinces and Bombay Deccan. The Imperial Council of Agricultural Research made a grant for the completion of the Burmah-Shell Corporation's experiments in the Bombay Deccan and published their results as a monograph.

CHAPTER IV.—Agricultural Improvement—*contd.*

*Recommendation 73. Problems of cultivation in dry and precarious tracts.*—This is largely provincial but the Imperial Council of Agricultural Research has made grants to three provinces and one Indian State for a co-ordinated scheme of research on this group of problems.

*Recommendation 79. Precautions against mixing of seeds in ginning factories.*—Legislation for licensing of ginning and pressing factories has been passed in Bombay, Sind, Central Provinces and licensing is in vogue in Hyderabad and Indore States.

10. *Railway Freight concessions on fertilisers and agricultural machinery. (Recommendations 39 and 69—paragraphs 95 and 109.)*

The rates for manures on the principal railways, both State-managed and Company-managed lines, were reduced to the minimum permissible under the classification, *i.e.*, 1/10th pie per maund per mile, in 1928. It was, however, found that advantage was being taken of this concession rate for various commodities which, while occasionally used as manures, were more largely utilised for other purposes. In 1931, Railways notified that the 1/10th pie rate would apply only to certain descriptions of manures and then too only on production of a certificate from a gazetted officer of the Agricultural Department. The list of fertilisers to which the special rates applied was drawn up by Railway Administrations after taking into consideration the local conditions obtaining on each railway. Recently, owing to altered conditions, the rates for manures have been slightly enhanced; most of the principal Railways quote either C/F or C/R schedule, the basis of which is as follows:—

							Pie per maund per mile.
C/F	for any distance	..	..	..	..	..	0.140
C/R	{ 1—150 miles	..	..	..	..	..	0.140
	{ +151 miles and over	..	..	..	..	..	0.110

Freight rates on agricultural implements and machinery were re-examined in 1928, when it was decided to reduce the classification for such implements and machinery not worked by their own power (*i.e.*, which is the only kind manufactured in India) from 2nd class (0.42 pie per maund per mile) to 1st class (0.38 pie per maund per mile) which is the lowest class in the Railways' General Classification of Goods. This revision of the classification had also the effect of removing the anomaly referred to in paragraph 313 of the Agricultural Commission's Report, regarding sugarcane mills not being included under agricultural implements.

11. *Modification of Rules framed under the Destructive Insects and Pests Act, 1914. (Recommendation 74—paragraph 113.)*

The Royal Commission held that no modification of the Rules framed under the Destructive Insects and Pests Act, 1914, so as to enable Directors of Agriculture to import prohibited material direct for experimental purposes was called for. This view was accepted and Local Governments were informed accordingly. The Rules have been amended with a view to prevent the introduction into British India of plant and fruit pests by air, and to restrict the import of Hevea rubber plants and seeds from America and West Indies, of coffee plants and unroasted and unground coffee seeds and beans and citrus plants. Aden has been excluded from the operation of the Rules but the restrictions imposed by the Rules continue to apply to all exports from Aden to other parts of British India.

12. *Co-operation of maritime Indian States in preventing the importation of Pests and Diseases from outside India. (Recommendation 75—paragraph 113.)*

The Imperial Council of Agricultural Research, to which the question was referred for advice, recommended that the most feasible method was to seek the co-operation of the maritime Indian States in dealing with each specified problem as it arose. This recommendation endorses the present practice and has been accepted by the Government of India.

#### CHAPTER IV.—Agricultural Improvement—*contd.*

The Indian States concerned are generally co-operating in the enforcement of the rules under the Destructive Insects and Pests Act.

##### 13. *Strengthening of the Mycological and Entomological staff of the Central Government. (Recommendation 77—paragraph 114.)*

The recommendation was examined in connection with the general question of the measures which could be taken by the Government of India to assist the sugar industry and the Agricultural Adviser was requested to formulate schemes for strengthening the Imperial mycological and entomological staff to deal with pests and diseases of cane. Proposals submitted by him were placed before the I. C. of A. R. who have made a grant to the I. I. of A. R. providing for a Mycologist and a staff for sugarcane diseases. The I. C. of A. R. have also made a grant for Staff for research in sugarcane pests which is being carried on by the second Entomologist who has been relieved of his other duties.

##### 14. *Grant of gun-licenses for the protection of crops and cattle from wild animals. (Recommendation 80—paragraph 116.)*

The Government of India examined the question and found that no further instructions to Local Governments were called for. The Tariff Board recommended that agricultural fencing wire should be free of the protective duty—the Government of India were unable to accept this for revenue reasons in view of the large use of precisely similar wire for non-agricultural purposes.

##### 15. *Tariff Concessions. (Recommendations 45, 70 and 71—paragraphs 99 and 110.)*

*Recommendation 45. Exemption of seeds, seedling plants, etc., from import duty.*—The Royal Commission recommended that seeds, seedling plants and cuttings of exotic species and of exotic varieties of indigenous species imported for experimental sowing or planting should be exempted from import duty. In pursuance of this recommendation living plants were first exempted from duty in November 1929 by a notification under section 23 of the Sea Customs Act. This exemption was subsequently placed on a statutory basis by the Indian Tariff (Amendment) Act, 1930. A detailed examination of the recommendation regarding exemption of seeds was made in the Departments concerned but further consideration of it had to be postponed until the financial situation improved. The question is again under consideration in the Central Board of Revenue.

*Recommendation No. 70. Rebate of import duties on iron and steel used in the manufacture of agricultural implements and machinery.*—With reference to representations received by the Commission that whilst agricultural implements and machinery with a few exceptions were admitted into India free of duty, high protective duties were levied on imported iron and steel, it was recommended that the claims of manufacturers in India for a rebate of the import duties on iron and steel used in the manufacture of agricultural implements and machinery should be investigated by the Indian Tariff Board. It has been considered unnecessary to take any action in connection with this recommendation, as in any case in which it can be shown that an industry is hampered by reason of the fact that the duty on the finished article is lower than the duty on the materials required to be imported for its manufacture it is open to the manufacturers to apply for the removal of such inequality through the Tariff Board in accordance with the Commerce Department Resolution no. 38-T. (2), dated the 28th March 1925, which was published in the Gazette of India of the same date. It may also be mentioned that as a result of the last Tariff Board Enquiry on the Iron and Steel industry the protective duties on steel plates and structurals not of British manufacture have been substantially reduced. Similar British manufactures are now liable to a revenue duty only. Steel billets imported for re-rolling have further been exempted from customs duty in excess of the excise duty which is leviable on billets of Indian manufacture.

*Recommendation No. 71. Interpretation of the term "Agricultural implements" in the Tariff schedule.*—In accordance with the recommendation of the Commission, pans for boiling sugar

#### CHAPTER IV.—Agricultural Improvement—concl'd.

eane juice, sugar centrifuges and pug mills, and parts thereof as well as incubators for poultry farming were exempted from import duty by the Indian Tariff (Amendment) Act, 1930. Since then flame throwers for attachment to spraying machines designed for the extermination of locusts and 'Latex cups' have been added to the free list of agricultural implements.

#### CHAPTER VI.—Demonstration, and Propaganda.

##### 16. *Discontinuance by the Board of Agriculture of its Review of the methods of Demonstration and Propaganda employed in the provinces. (Recommendation 1—paragraph 129.)*

In December 1929, the Board of Agriculture in India passed a Resolution recommending that a review of the organisation for all methods of agricultural propaganda and other extension work should find a place in the agenda for future meetings of both the Agricultural and Animal Husbandry wings of the Board. Effect has been given to this resolution and the subject has found a place on the agenda of subsequent meetings.

##### 17. *Government of India prize for agricultural improvements. (Recommendation 34—paragraph 150.)*

This has been accepted and the Imperial Council of Agricultural Research offers gold and silver medals annually for such inventions. It also offered a cash prize for an improved bone-crusher and the winning machine is now under test and alteration.

#### CHAPTER VII.—Animal Husbandry.

##### 18. *Export of cattle. (Recommendation 46—paragraph 204.)*

The Royal Commission held that the export of cows and heifers is usually undesirable and should be carefully watched, but that unless the extinction of some valuable breed is threatened the export of breeding bulls should not be prohibited. In the case of certain breeds, export might be subject to licence.

The export of cattle is negligible except from the Madras Presidency. In order to watch the exports of cows and heifers from that province, the Collector of Customs, Madras, was asked in May 1929 to maintain special statistics of the export of cattle under suitable heads. These statistics which continued to be maintained up to September 1931 showed that the great majority of the animals exported were bullocks and bulls, and it was considered that it would be to the advantage of India to develop this trade.

As regards the export of bulls, the Madras Government were asked whether they wished the prohibition of export of all cattle of the Ongole breed, which had been in force since 1922, to continue or whether the export of bulls of that breed might be permitted under license. The local Government agreed to permit the export of bulls and bullocks of the Ongole breed under licenses to be issued by the Director of Agriculture, Madras, and the prohibition notification of 1922 was accordingly amended in January 1930.

##### 19. *Establishment of a Central Institute of Animal Nutrition. (Recommendations 52 and 53—paragraph 209.)*

A scheme for such an Institute was prepared but it had to be postponed, owing to financial stringency. It has recently been decided to establish an animal nutrition institute at Izatnagar (Barcilly) and to treat it as part of the organisation under the Director I. I. of Veterinary Research as it was felt that there should be close contact between workers on problems of animal disease and those engaged on animal nutrition research.

CHAPTER VII.—Animal Husbandry—*contd.*20. *Animal Genetics. (Recommendations 54 and 55—paragraph 210.)*

Since April 1932, the Statistical Assistant attached to the Animal Husbandry Bureau has been engaged in carrying out a close analysis of the records of the very extensive cattle breeding which for many years has been carried on under strictly controlled conditions by the Military Dairies Department. A great deal of valuable information has thus been collected and published, in the proceedings of the Animal Husbandry Wing Meeting held in Delhi in February 1933, and in the Council's Journals, as to the results which have been obtained by this organisation in the improvement of indigenous dairy cattle and by cross-breeding. Similar analyses have been made of the systematic breeding which has been carried on at Government Farms where accurate records have been kept and steps have been taken to ensure that all such records shall in future be maintained on similar lines suitable for proper statistical analysis of the data.

The publication of these records has done a great deal to focus attention on the hitherto unsuspected capacity for economical milk and butter fat production of Indian cows, of pure indigenous origin.

21. *Dairying Section of the Imperial Institute of Animal Husbandry and Dairying, Bangalore (Recommendations 56—60—paragraph 211.)*

These recommendations were discussed at a conference held in Simla in October 1928. The view taken by almost all the provincial representatives at the conference was that there was demand for higher training in dairying which the provincial agricultural colleges were not then in a position to meet and that therefore it would be premature to close down the dairy section of the Institute. Local Governments were informed that, in deference to this opinion, the Government of India did not intend to make any immediate change in the organisation of that section. They were however asked to examine the recommendations of the Royal Commission (i) that a thoroughly efficient dairy school should be established as an integral part of one or more agricultural colleges and (2) and that the curriculum of all agricultural colleges should include instruction in cattle-breeding, the feeding of dairy cows and the handling of milk, and to report what action they proposed to take in regard to them. Their replies showed that instruction such as was recommended by the Royal Commission was already provided at the various agricultural colleges. The replies of local Governments, in regard to the other recommendation were referred to the I. C. of A. R. and the latter was of opinion that there was great scope for one or two central institutes for education and research in dairying. Shortly afterwards it became necessary to re-organise the Pusa institute and its sub-stations owing to the need for economy on account of financial stringency, and it was decided in 1932 that the institutes at Bangalore and Wellington and the Imperial Cattle Breeding Farm at Karnal should be retained but on a somewhat reduced scale. Experimental cross-breeding was discontinued at both Bangalore and Wellington and the supply of milk at both places was restricted to the demands of the troops. Bangalore now maintains three pedigree herds of indigenous breeds, *viz.*, Sindhi and Gir and Murra buffaloes. The Karnal Farm maintains the Haryana and Tharparkar breeds. The Indian Dairy Diploma course of instruction has been continued at Bangalore as provinces desired its continuance. The course is now being modified and it is proposed to ask provinces to make provision for the more elementary part of the course, Bangalore concentrating on dairy technology in future. The equipment and staff at Bangalore is being improved as one central dairy institute is necessary. The Anand Creamery was closed as a measure of retrenchment but is being restarted as an experimental creamery for experimental work in butter and *ghi* manufacture and in the handling, processing and transport of milk and milk products. Chemical assistance has been arranged for at Bangalore. A scheme of work on the chemical composition and properties of Indian goat, cow and buffalo milk is to be carried out jointly with the Indian Institute of Science with the aid of a grant from the Imperial Council of Agricultural Research.

22. *Continuance of the Cattle Bureau. (Recommendation 62—paragraph 211.)*

An Animal Husbandry Bureau has been started under the Imperial Council of Agricultural Research since November 1933 with a nucleus staff consisting of a statistical Assistant and a clerk. Its main functions are the collection, collation and dissemination of information required for the proper development of Animal Husbandry in India and *inter alia* it has now taken steps to institute an All-India system of registration of pedigree stock based on official definition of the breed characteristics of 7 of the best known indigenous breeds of cattle and officially controlled milk-recording in the case of dairy cattle.

## CHAPTER VII.—Animal Husbandry—concl'd.

### 23. Cattle Conferences. (*Recommendation 62—paragraph 211.*)

The Animal Husbandry Wing of the Board of Agriculture and the Animal Husbandry Research Workers Conferences have taken the place of the Cattle Conferences.

The first meeting of the Animal Husbandry Wing of the Board of Agriculture and Animal Husbandry was held in February 1933. Action has since been taken to implement a number of recommendations accepted by the Wing, including the formation of Standing Cattle Breeding, Dairying and Animal Nutrition Research Committees and it is proposed to hold the Second meeting of this Wing during the current year. The meetings of the Committees are held in conjunction with the half yearly meetings of the Advisory Board.

In addition an Animal Husbandry Research workers conference has been organized at which all branches of Animal Husbandry are represented and a variety of research subjects discussed. The first meeting of this conference was held in February 1936.

### 24. Representation of the interest of Animal Husbandry on the Council of Agricultural Research. (*Recommendations 63—65—paragraph 212.*)

This has been accepted and Colonel A. Olver, C.B., C.M.G., F.R.C.V.S., was appointed Animal Husbandry Expert to the Imperial Council of Agricultural Research from the 18th April 1930. The sanction to the post has been extended up to the 17th April 1940.

As stated in item 23 above Standing Committees of the Imperial Council of Agricultural Research have been set up for Animal Nutrition Research, Animal Breeding and Dairying. In addition *ad hoc* Committees consider all Schemes and review annually the reports of the Disease Investigation Officers who are engaged, under a scheme financed by the Council, in systematic investigation of stock diseases in all major provinces and states affiliated to the Council. Special Committees have also been set up to deal with helminthology, sheep and goat breeding and apiculture.

## CHAPTER VIII.—Forests.

### 25. Railway freight on fodder, wood, charcoal and coal. (*Recommendations 5 and 7—paragraphs 219 and 220.*)

*Fodder.*—This is classified at 1st class (0.38 pie per maund per mile). Most principal railways quote special schedule rates considerably lower than the ordinary classified rate for this commodity when carried at owner's risk and in wagon loads, the rates over the State-managed Railways in India being as follows :—

Eastern Bengal	..	..	..	Schedule C*/C; †W/120.
East Indian	..	..	..	Schedule C/D*; †W/120.
Great Indian Peninsular	..	..	..	Schedule CB/CJ*; †W/160, in through booking. Schedule Q*; on carrying capacity, in local booking.
North Western	..	..	..	Schedule C/R*; †W/270 in through booking. Schedule L/T* in local booking.

\* These letters are merely distinctive marks adopted by Railways for certain bases of charge other than those adopted for class rates which are distinguished by numbers 1, 2, 2A, 2B, 2C, 3, etc.

† W indicates the minimum load in maunds per 4-wheeled wagon to which the rates apply.

CHAPTER VIII.—Forests—*contd.*

Calculated rates (exclusive of terminals) for certain distances for the schedules referred to above are as follows :—

Distances.				Per maund.								Per 4-wheeled wagon.			
				C/C.		C/D.		C/B-C/J.		C/R.		L/T.	Q.		
				Rs.	as. p.	Rs.	as. p.	as.	p.	as.	p.	Rs.	Rs.		
50	..	..	..	0	1	3	0	1	1	1	5	0	7	11	16
100	..	..	..	0	2	6	0	2	1	2	9	1	2	22	31
200	..	..	..	0	5	0	0	4	2	5	7	2	3	39	59
300	..	..	..	0	7	6	0	6	3	8	4	3	2	52	84
400	..	..	..	0	10	0	0	8	4	10	0	4	1	64	106
500	..	..	..	0	12	6	0	10	5	11	8	5	0	77	128
700	..	..	..	1	1	6	0	14	7	13	10	6	10	102	172
900	..	..	..	1	6	6	1	2	9	15	6	8	8	127	216

*Wood.*—Firewood, which is the commodity the Royal Agricultural Commission had in mind is classified 1st class, *i.e.*, 0·38 pie per maund per mile. Most principal Railways quote, however, special schedule rates which are lower than the ordinary classified rate for this traffic when carried in wagon loads at owner's risk; the rates over the State-managed Railways being as follows :—

Eastern Bengal .. ..	C/N; W/300.
East Indian .. ..	C/R; W/300.
Great Indian Peninsular .. ..	C/Q; W/300 in through booking. Q; on carrying capacity in local booking.
North Western .. ..	C/R; W/300.

The calculated rates per maund for various distances for the schedules referred to above are as follows :—

Distances.	C/N.	C/R.	C/Q.	Q Per 4-wheeled wagon.
	As. p.	As. p.	As. p.	Rs.
50	1 5	0 7	0 10	16
100	2 6	1 2	1 8	31
200	4 0	2 3	3 1	59
300	5 5	3 2	4 3	84
400	6 6	4 1	5 5	106
500	7 4	5 0	6 7	128
700	9 0	6 10	8 3	172
900	10 8	8 8	9 11	216

*Charcoal.*—This is also classified 1st class (*i.e.*, 0·38 pie per maund per mile). Most of the principal Railways quote special schedule rates for this traffic when carried in wagon loads at owner's risk; the rates over the State-managed Railways are as follows :—

Eastern Bengal .. ..	C/N;	W/300
East Indian .. ..	the same rate as for hard coke ( <i>i.e.</i> , rate for coal including the sur-charge).	
Great Indian Peninsular .. ..	C/Q;	W/300
North Western .. ..	C/Q;	W/300

## CHAPTER VIII.—Forests—concl'd.

The calculated rates per maund for various distances for the schedules referred to above are as follows :—

Distances.	C/N. As. p.	C/Q. As. p.
50	1 5	0 10
100	2 6	1 8
200	4 0	3 1
300	5 5	4 3
400	6 6	5 5
500	7 4	6 7
700	9 0	8 3
900	10 8	9 11

*Coal.*—This is charged over most principal railways at a special scale, the basis of which is as follows (*plus* a surcharge of 12½% subject to a maximum of Re. 1 per ton) :—

	Pie per md. per mile.
(i) <i>For traffic carried for distances 400 miles and under :—</i>	
For all distances up to 200 miles inclusive . . . . .	0·165
Plus for any distance in excess of 200 miles and up to 400 miles inclusive . . . . .	0·13
(ii) <i>For traffic carried for distances over 400 miles :—</i>	
For all distances up to 200 miles inclusive . . . . .	0·15
Plus for any distance in excess of 200 miles and up to 400 miles inclusive . . . . .	0·06
Plus for any distance in excess of 400 miles . . . . .	0·05

The freight rates for all the commodities specified above are on a very low basis, and Railways have not felt justified in making any further reductions in these rates.

## CHAPTER IX.—Diseases of Livestock and their control.

26. *All-India Contagious Diseases of Animals Act.* (Recommendation 14—paragraph 246.)

A draft Bill and model rules thereunder have been prepared and circulated to local Governments and the suggestions and amendments received are now under consideration by the Imperial Council of Agricultural Research, with a view to early submission of the Bill to the legislature.

27. *Revision of the emoluments of Veterinary Advisers to Local Governments.* (Recommendations 23 and 24—paragraph 251.)

In view of the diversity of opinion which existed on this question it was decided by the Government of India not to adopt a uniform rate of emoluments for veterinary advisers in the provinces. Local Governments were informed accordingly and told that they might, if they so desired, reconsider the question in the light of the recommendations of the Royal Commission. The emoluments of the posts of Director Veterinary Services in the Punjab and in the Madras Presidency and of the post of Veterinary Adviser in Burma, when held by members of the I. V. S., have been revised with the sanction of the Secretary of State.

28. *Higher Veterinary Training.* (Recommendations 43—46—paragraph 258.)

The recommendation for the institution at one of the existing veterinary colleges of a course of training for candidates for the provincial veterinary services was taken up in 1931 and generally



CHAPTER IX.—Diseases of Livestock and their control—*contd.*

speaking, accepted by all local Governments. The majority of them however made it clear that they would be unable to proceed with the expansion of their provincial veterinary services while present financial conditions continued. For the same reason the Government of India also found themselves unable to proceed with this recommendation. It has been estimated that if the veterinary college at Lahore were selected for the purpose, the scheme would involve an immediate non-recurring expenditure of Rs. 1,325 and a recurring expenditure of Rs. 70,760, and an ultimate non-recurring expenditure of Rs. 86,825, and a recurring expenditure of Rs. 1,01,470, exclusive of the cost of a dairy, which would probably be required as an adjunct to the college. The Government of India were unable to find these sums, even if they accepted them as a legitimate charge on central revenues, and as local Governments were evidently not in position to do so, it was decided to defer further consideration of the proposals. Meanwhile a Students have to go to the Veterinary Colleges in Great Britain for full professional training but the pay and prospects offered to them were until recently, so inadequate, in comparison with the time and money necessarily spent on their training in England (Minimum of 5 years professional training) that the supply of candidates for such training has almost completely dried up.\*

The matter of veterinary training in India is again under consideration.

29. *The Imperial Institute of Veterinary Research, Muktesar. (Recommendations 49—55 and 59—paragraphs 262—264.)*

The Government of India accepted the view of the Commission that Muktesar was well suited for the prosecution of research into animal diseases and that a second Imperial Institute of Veterinary Research was not required. In view of the isolation of Muktesar the Royal Commission recommended that Government should take all reasonable measures to increase the amenities of life at that station. It has been decided that each case as it arises should be dealt with in the light of this recommendation.

The Secretary of State was asked to recruit a Director of the Institute with the qualifications and experience on which stress was laid by the Royal Commission, but it was not found possible to recruit a suitable officer outside India and an experienced officer of the I. V. S. was appointed as Director. On the abolition of the post of Agricultural Adviser the administrative control of the Institute, as recommended by the Commission, passed to the Director of the Institute.

A scheme was prepared for the reorganisation of research work at the Institute into three sections dealing with Pathology, Serology and Protozoology respectively, each having two class I officers, one to be in charge of the section and the other to act as his deputy. Two of these sections have been functioning for some time with the full complement of staff. For the Protozoological Section the I. C. of A. R. have agreed to bear the cost of a Systematic Protozoologist (a class I officer) for a period of five years and, in addition, it has been decided to have two permanent class I officers in the Section. It is expected that this section also will soon be constituted.

The Director has been provided with a Personal Assistant to relieve him of routine administrative and secretarial work.

The recommendation that an effort should be made to distinguish as fully as possible between the expenditure on research and that on manufacturing operations was accepted, and the system of cost accounts was introduced at the Imperial Veterinary Serum Institute, Izatnagar, from the 1st August 1930. It was considered unnecessary to introduce this system at Muktesar since about 90 per cent. of the total quantity of sera and vaccines produced was manufactured at Izatnagar and the policy was to concentrate all manufacture there. On the basis of the cost of production for 1931-32 at the Izatnagar institute the selling rates of most of the products were considerably reduced.

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\*Footnote to remarks relating to Recommendations 43 to 46 Chapter IX

		1932-33.	1933-34.
Admission of <i>Indian</i> students to Royal Veterinary College .. ..	1		<i>Nil.</i>
Total number of <i>Indian</i> students in attendance .. ..	26		14

## CHAPTER IX.—Diseases of Livestock and their control—*conold.*

30. *Revival of the appointment of the Inspector-General Civil Veterinary Department, or the creation of a post of Veterinary Adviser to the Government of India. (Recommendation 56—paragraph 264.)*

The view of the Royal Commission that neither of these posts was necessary has been accepted. The Vice-Chairman of the I. C. of A. R., acting with the Animal Husbandry Expert to the Council advises the Government of India in veterinary matters.

31. *Standing Committee of the Imperial Council of Agricultural Research to deal with Veterinary matters. (Recommendations 57-58—paragraph 264.)*

On the recommendation of the Animal Husbandry Wing of the Board of Agriculture and Animal Husbandry, standing committees have been appointed to deal with animal nutrition, cattle breeding and dairying, and special committees to co-ordinate helminthological research in India and to deal with the reports of the Disease Investigation Officers who are employed in provinces and states under a grant from this Council. A special committee was also appointed to draft the proposed all India Act for the control of contagious diseases among Livestock in India. These Committees usually meet in conjunction with the meetings of the Advisory Board.

## CHAPTER X.—Irrigation.

32. *Establishment of a Central Bureau of Information on Irrigation matters (including matters arising out of Hydro-electric development). (Recommendations 19, 20, 25 and 37—paragraphs 285, 288 and 295.)*

The Central Bureau of Information for Irrigation was established in 1931 to perform the functions contemplated for it by the Royal Commission on Agriculture. It was financed by the Government of India during the year 1931-32, and since then it has been maintained from the contributions of the Central and Provincial Governments (except the Central Provinces) and certain Indian States. It is now functioning as an independent body under the direct control of the Central Board of Irrigation.

The Bureau consists of a Secretary with a small office, including a library. The Bureau has no special powers; it is the office of the Central Board of Irrigation and a centre of information. Like the Central Board of Irrigation, the Bureau is now a well established institution, and its usefulness is recognised by all the Provinces with important irrigation interests.

33. *Transfer of District Canals in the N.-W. F. P. to the charge of the Irrigation Department. (Recommendation 35—paragraph 293.)*

The Chief Commissioner was consulted and his proposal that the technical control of the main District Canals should be transferred to the local Irrigation Department but that the revenue control should remain with the revenue authorities was sanctioned as an experimental measure for a period of two years from 1st April 1930. Towards the end of that year it was represented by the local Administration that this arrangement was unworkable and after further consideration of the matter orders were issued for the transfer, as an experimental measure up to the 31st March 1933, of the complete management, both technical and revenue, of all civil canals in the province to the Irrigation Department which was to function for this purpose in close touch with the Deputy and Revenue Commissioners concerned. The N.-W. F. P. having become a Governor's province in 1932 further action on the part of the Government of India became unnecessary, but it is understood that the Local Government have continued the arrangement under which the entire management of the civil canals is carried on by the local Irrigation Department.

## CHAPTER X.—Irrigation—*concl'd.*

### 34. *Irrigation in Baluchistan. (Recommendation 36—paragraph 294.)*

A temporary post of Superintending Engineer for Irrigation in Baluchistan has been sanctioned. Several works of importance to the Administration have been carried out. Owing, however, to the need for economy, it has not been possible to undertake new works of magnitude recently and the activities of the irrigation staff have been confined mainly to the management and maintenance of the existing canals.

## CHAPTER XI.—Communications and Marketing.

### 35. *Periodical revision of railway freight rates with a view to the adjustment of their incidence and removal of anomalies—Freight concessions for livestock and empties for fruit and milk. (Recommendations 15, 16, 18 and 47—paragraphs 313, 315 and 345.)*

Railway rates are constantly under examination by Railway Administrations and adjustments are made from time to time to meet special cases as they arise. The Commission in this connection referred to two anomalies in railway freight charges as deserving of examination :—

- (a) sugar-cane mills not being classified under agricultural implements ;
- (b) charges for newly born calves being the same as for a full grown cow.

As regards (a), this anomaly has since been removed by the revision of the classification for agricultural implements (*vide* remarks under item 10.)

As regards (b), calves not more than 3 feet 6 inches high at the shoulder when accompanying parent animals in the same vehicle are carried free.

Quarter parcel rates were introduced, with effect from the 1st August 1929, for the carriage of return empty milk cans and fruit cases by passenger train.

The necessity for the rapid transport of livestock is recognised, but it has not been found practicable to carry by passenger train livestock booked at goods rates.

The question of making it compulsory for Railways to unload cattle after travelling 200 miles was examined by the Indian Railway Conference Association who were unable to recommend its adoption as :—

- (a) it would be difficult to work such a rule ;
- (b) the arrangement would not be popular with owners.

The Railway Board agreed with these views.

### 36. *Eradication of Water Hyacinth. (Recommendations 21 and 22—paragraph 318.)*

The Imperial Council of Agricultural Research financed a research scheme by Professor Parija of Cuttack which cleared up the question of reproduction of the water hyacinth. Water hyacinth is now being effectively controlled in Orissa as a result of organised local action. A Bill is now before the Bengal Legislature.

### 37. *Post and Telegraph facilities. (Recommendation 23—paragraphs 319.)*

No use has been made of the collective guarantee system by any Local Government or Administration or private party and consequently no post or telegraph office was opened in any postal circle within British Indian territory, under the above system.

## CHAPTER XI.—Communications and Marketing—*contd.*

### 37-A.—*Establishment of well regulated markets. (Recommendations 24—51—paragraphs 320 and 329—349.)*

A copy of Government of India (Imperial Council of Agricultural Research Department) resolution No. F.-16-M./34, dated the 10th January 1935 regarding the establishment of the office of the Agricultural Marketing Adviser to the Government of India is annexed (*vide* Appendix). The first batch of marketing surveys are now being completed and the reports will appear during the summer of 1936. As a result of the discussion at the Provincial Economic Conference in 1934, it was found that provinces were unable to finance provincial marketing staffs themselves. The Government of India made a grant to the Imperial Council of Agricultural Research of 10 lakhs for expenditure in the provinces in addition to providing the central marketing staff. Most provinces have supplemented the minimum staff of three Assistant Marketing Officers paid from the Council's grant and each province has provided a Provincial Marketing Officer to control the local staff.

### 38. *Standardisation of weights and measures. (Recommendation 37—paragraph 339.)*

The Royal Commission recommended that the Government of India should again undertake an investigation into the possibility of standardising weights and measures throughout India, excluding Burma, and should lay down general principles to which provincial Governments should adhere, so far as this is possible, without undue interference with local trade customs.

When they made this recommendation, the Royal Commission appear not to have been aware that the Government of India had made enquiries, at the beginning of 1927, as to the progress made by local Governments in standardising weights and measures. The results of that enquiry show that progress in the direction of standardising weights and measures has been more substantial than the Royal Commission thought. Some of the local Governments have already enacted legislation for the standardisation of weights and measures, *e.g.*, the Central Provinces, Coorg, and Bomhay, while most of the other local Governments have taken executive action for the standardisation of weights based on the Railway system. In these circumstances, the Government of India are of opinion that no further action is called for on their part.

### 39. *Grain Elevator System. (Recommendation 46—paragraph 346.)*

The establishment of grain elevators was not recommended by the Commission. This view has been accepted by the Government of India.

### 40. *Investigations into the possibilities of Cold Storage to be carried out under the auspices of the Railway Board. (Recommendation 48—paragraph 346.)*

Investigations are being made by the I. C. of A. R. in regard to the question of fruit preservation and transport especially for overseas market. The possibility of exporting mangoes in good condition to England was demonstrated by experimental shipments in 1932 and 1933. The fruit storage scheme which is in progress at Poona is providing technical data regarding the optimum conditions of temperature and humidity for the commercial storage of Indian mangoes and oranges, the commercial storage life of different varieties and the correct stage of picking and the suitability of various important varieties for transport and storage. Action on the part of the Railway Board has been deferred pending the results of these investigations.

Meantime, a refrigerated transport service for the carriage of provisions and stores from cold storage depots in Calcutta has been arranged from Howrah to serve stations up to Delhi but although this service has been operating for over four years, it does not appear that the facility is being taken advantage of now to any greater extent than in 1931.

In regard to the carriage of milk, a firm interested in dairy produce in the Gtizerat area has been permitted to own three insulated vans for the carriage of milk to Bombay.

## CHAPTER XI.—Communications and Marketing—*concl'd.*

Arrangements are also being made by another private firm for the construction of refrigerated vans for the carriage of frozen foods (including milk and other Indian products) for distribution to various centres.

In the case of such vans, permission for their being owned by private individuals or firms, has been granted subject to the Railway Administration having the right to acquire them if and when such acquisition is considered necessary or desirable.

### 41. *Expert assistance in Agriculture and co-operation to the Indian Trade Commissioner in London and the Director General of Commercial Intelligence in Calcutta. (Recommendation 51, paragraph 349.)*

The Royal Commission suggested that an officer with experience of agriculture and co-operation in India should be attached to the staff of the Indian Trade Commissioner in London and to that of the Director General of Commercial Intelligence in Calcutta.

The recommendation regarding expert assistance for the Indian Trade Commissioner in London has been accepted in principle, but owing to financial stringency the question of appointing an officer has been held in abeyance.

As regards similar assistance for the Director General of Commercial Intelligence and Statistics, it is thought that he is already in a position to get all the expert advice he wants from the provincial Directors of Agriculture and the exporters at the Indian ports.

### 42. *Appointment of Trade Commissioners in other countries.. (Recommendation 52—paragraph 349.)*

A scheme for the appointment of six Indian Trade Commissioners, one each at Hamburg, Milan, New York, Alexandria, Durban and Mombasa has been sanctioned with the approval of the Secretary of State. In pursuance of this scheme the offices of the Trade Commissioners at Hamburg and Milan were opened on the 1st March 1931 and 1st February 1935 respectively. The question of appointing Trade Commissioners in the other centres is being actively pursued. The question of appointing an Indian Trade Commissioner in Japan is also under consideration.

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## CHAPTER XII.—The Finance of Agriculture.

### 43. *Review of position of money lenders. (Recommendation 23—paragraph 368.)*

The recommendation of the Royal Commission that the position of the money-lenders should be reviewed periodically by the Income-tax Department has been accepted and a review of the position is now included annually in the All India Income-tax Report and Returns published by the Central Board of Revenue.

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## CHAPTER XIII.—Co-operation.

### 44. *Co-operative movement in Minor Administrations. (Recommendation 15—paragraph 378.)*

The Royal Commission held that there was justification for a larger contribution from Government funds to the expenses of the co-operative movement in backward tracts, such as some of the minor administrations. As a result sanction was given to certain additional staff in the N.-W. F. P. (which was then a minor administration). In Delhi four Sub-Inspectors have been added to the staff of the Co-operative Department. In Ajmer-Merwara the grant-in-aid to the Co-operative Societies Salary Fund sanctioned in 1927 for a period of five years

### CHAPTER XIII.—Co-operation—concl'd.

was continued for a further period of five years though, owing to financial stringency, the amount had to be reduced from Rs. 7,000 to Rs. 5,000 per annum. For 1936-37 the grant has been raised to Rs. 8,000. Out of Rs. one crore set aside in the Central budget for 1935-36 for rural development a sum of Rs. 15 lakhs was earmarked for co-operative training and education and out of this sum Coorg and Delhi have been allotted Rs. 20,000 and Rs. 9,000 respectively. The allotment to Ajmer-Merwara was still under consideration at the close of 1935.

#### 45 *All-India enquiry into the co-operative movement.* (Recommendation 39—paragraph 389.)

The view taken by the Royal Commission that an all-India enquiry into the progress of the co-operative movement was not necessary was accepted by the Government of India.

### CHAPTER XIV.—The Village.

#### 46. *Production of quinine and control of its distribution.* (Recommendations 10 and 11—paragraphs 411 and 412.)

The Governments of Madras and Bengal were asked for their views on the recommendation of the Royal Commission that the development of cinchona cultivation, the manufacture of quinine, and the control of distribution so far as price within India was concerned should be made a responsibility of the Central Government, and to state the terms on which they would be prepared to transfer their plantations and factories to the Government of India if it were decided to give effect to the Royal Commission's recommendation. The Government of Madras were willing to transfer their plantations and factory to the Government of India but the Government of Bengal were not in favour of the proposal as they did not consider that the mere centralisation of the provincial Cinchona Departments would solve the problem of fighting malaria on a large scale. Apart from this objection to the proposal, it was not possible in 1931 for the Government of India, in the state of financial stringency which then prevailed, to find the money for the purchase of the cinchona plantations and factories in Bengal and Madras. Moreover it was then anticipated that the new constitution would deprive the Government of India of their power under the Devolution Rules to control the production, supply and distribution of quinine. It was therefore decided to take no action for the time being on the recommendation. The recommendation for the establishment of a research institute for the investigation of cultural difficulties met with in the growing of cinchona was also dropped as it was considered that the only hope of such investigation being undertaken lay in the formation of a strong Imperial Department.

It may be stated that the new constitution has, as anticipated, deprived the Government of India of their power of control over the production, supply and distribution of quinine.

#### 47. *Medical aid.* (Recommendation 12—paragraph 413.)

Proposals for establishing an enlarged Central Medical Research Institute have been considered, but for financial reasons the question has been held in abeyance. In the meantime certain additions and alterations to the present Central Research Institute at Kasauli have been carried out to improve working conditions and to develop a section of Medical Entomology.

Attention has been directed to general rural health improvements. An allotment of Quinine to each of the provinces has been made, for free distribution. A crore of rupees has also been allotted among provinces for rural reconstruction work. Two Health Units have been established in Burma and the United Provinces in co-operation with the Rockefeller Foundation mainly for rural health demonstration work.

#### 48. *Human Nutrition.* (Recommendations 13, 15—17 and 19—paragraphs 414 and 417.)

Proposals for the establishment of a Central Medical Research Institute in which a Nutrition Section was merged, have been considered, but on account of the financial stringency prevailing at the time the scheme has been held in abeyance.

CHAPTER XIV.—The Village—*concl'd.*

Problems of human nutrition however are being steadily investigated by Dr. W. R. Aykroyd who succeeded Major General Sir R. McCarrison as Director of the Nutrition Research Laboratory at Coonoor, which is conducted under the auspices of the Indian Research Fund Association. Valuable data have been collected from investigations in that Laboratory on Deficiency disease, Vitamin standards, Analysis of foodstuffs, Animal experiments, Tissue Culture, etc., and by an extension of the field activities of the laboratories the collection of anthropometric data, bearing on nutrition, Education and Propaganda.

A section of Bio-Chemistry and Nutrition has also been opened at the All-India Institute of Hygiene and Public Health at Calcutta where several aspects of the problem are being tackled in co-ordination with the Coonoor Laboratory by Dr. Ellis Wilson, Professor of Nutrition and Biochemistry.

In addition to the appointment of a nominee of the Indian Research Fund Association on the Advisory Board of the Council of Agricultural Research, the Council have reserved a seat for this nominee on the Animal Health and Husbandry Wing of the Board of Agriculture in India. Thus coordination between workers on human nutrition and the Agricultural departments has been secured. Both the Director of the Nutrition Research Laboratory, Coonoor, and the Professor of Nutrition and Biochemistry are in close touch with research workers in other parts of the world.

## CHAPTER XV.—Education.

49. *Post-graduate training in agricultural science. (Recommendations 42 and 43—paragraph 480.)*

Please see the remarks under item 3.

50. *Educational Conferences. (Recommendation 47—paragraph 483.)*

In order to ensure a closer interchange of opinion and experience in educational matter throughout India, a Central Advisory Board of Education has been established with the following functions and constitution :—

(i) *Functions :*

- (a) To advise on any educational question which may be referred to it by the Government of India or by any local Government.
- (b) To call for information and advice regarding educational developments of special interest or value to India ; to examine this information and circulate it with recommendations to the Government of India and to local Governments.

(ii) *Constitution :*

- (a) The Honourable Member in charge of the Department of Education, Health and Lands (Chairman). On occasions when he is unable to preside over a meeting of the Board, he will have the right to appoint a deputy who will ordinarily be the Educational Commissioner with the Government of India.
- (b) The Educational Commissioner with the Government of India.
- (c) Ten nominees of the Government of India, of whom one at least shall be a woman.
- (d) One member elected by the Council of State.
- (e) Two members elected by the Legislative Assembly.
- (f) Three members nominated by the Inter-University Board, India.
- (g) A representative of each local Government, who shall be *either* the Minister in charge of Education (or his deputy) or the Director of Public Instruction (or his deputy).

## CHAPTER XV.—Education—*conold.*

The term of office of the non-official members has been fixed for three years, while the official members are to continue until they are replaced by others. There is a Secretary to the Board, who is appointed by the Government of India.

The first meeting of the Board was held in December, 1935, at which a number of important resolutions dealing with educational reconstruction and unemployment in India were passed.

The Board also appointed Committees on Women's Education, Secondary Education, Vernacular Education and Vocational and Professional Education.

## CHAPTER XVI.—Rural Industries and Labour.

### 51. *Indian Lac Association.* (*Recommendation 8—paragraph 499.*)

The suggestion made by the Indian Lac Association for Research that the Government of India should introduce fresh legislation for a continuance of the lac cess and for the constitution of a statutory committee for the control of the Research Institute and the Lac Cess Funds was accepted by the Government of India and the Indian Lac Cess Committee established by the Indian Lac Cess Act, 1930, which was brought into force on the 1st August 1931. The Act has recently been amended to enable the constitution of the Committee to be modified.

### 52. *Internal Migration.* (*Recommendation 21—paragraph 508.*)

The Tea Districts Emigrant Labour Act, 1932 (XXII of 1932), which came into force from the 1st October, 1933, makes it impossible to prohibit emigration to Assam from any area and is also designed to make it possible to reduce to a minimum the control exercised over such emigration.

### 53. *Emigration.* (*Recommendations 23 and 24—Paragraph 510.*)

It has been decided that no further action on the recommendations of the Royal Commission under this head is called for at present.

## CHAPTER XVII.—Horticulture and Plantations.

### 53-A. *Development of the fruit and vegetable industries.* (*Recommendations 3—15—paragraphs 515—519.*)

*Recommendations 3—5.—Difficulties in regard to the transport of fruit and absence of suitable marketing arrangements.*—A fruit marketing survey is now in progress and the report should issue early in 1936.

*Recommendation 6.—Possibilities of developing an export trade.*—The Imperial Council of Agricultural Research financed experimental shipments of Bombay (alphonso) mangoes to London in 1932 and 1933. The experiments were technically successful and a small profit was made in 1932. In 1933 a loss was incurred—mainly due to the premature operations of a Bombay commercial firm which flooded the market with mangoes and itself incurred severe loss. At present there is no regular programme of cool storage accommodation for fruit in steamers sailing from Bombay and this militates against the development of an export trade. This question will be taken up again as soon as the storage experiments in progress at Poona have provided definite information regarding optimum temperature and humidity conditions, the advantages, if any of gas storage for mangoes, and other technical details. It has already been established that when put into cool store at the correct stage of ripeness alphonso mangoes have a commercial storage life of 61 days at 45°F. See also remarks under item 40.

*Recommendations 7, 8, 10, 11 and 13.—Development of Fruit and Vegetable industries, establishment of regulated markets and provision of cold storage, etc.*—These matters are being dealt



## CHAPTER XVII.—Horticulture and Plantations—*concl'd.*

with in the marketing survey referred to above. Very marked interest in fruit-growing has developed during the last few years and the areas under fruit cultivation in some provinces, especially the Punjab, have increased. This is partly due to a desire to find more profitable crops in view of the fall in prices of staple commodities. The increasing imports of fruits from abroad indicate that an increase in fruit consumption is taking place in the Presidency towns and that the market is expanding.

*Recommendations 9, 12 and 15.—Selection and classification of suitable root stocks and encouragement to nurseries for orchard stock and the production of vegetable seeds.*—In view of the growing interest in fruit growing the Imperial Council of Agricultural Research has made grants for fruit research schemes in 7 Provinces and 2 Indian States. These are all for work on approved co-ordinated programmes which include *inter alia* the testing of both stocks and scions. East Malling and Merton apple-stocks are under test at the United Provinces hill fruit research station, a collection of indigenous citrus and other stocks has been made and these are under study at Lyallpur (Punjab). A study is being made of the indigenous species of citrus in Assam and mango stocks are being studied at Poona and in Bihar (Sabour).

*Recommendation 14.—Record by Marketing Officers of information regarding fruit and vegetable products.*—This will be done.

### 54. *Representation of Planting Community on the Council of Agricultural Research. (Recommendation 17—paragraph 521.)*

This suggestion has been accepted and a seat on the Advisory Board of the Imperial Council of Agricultural Research has been allotted to the Indian Tea Association and the United Planters' Association of Southern India, jointly.

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## CHAPTER XVIII.—Statistics.

### 55. *Improvement of Statistics. (Recommendations 1, 2, 4, 7, 8, 16—19, 21, 22, and 24-25—paragraphs 525 and 530—534.)*

*Recommendations 1, 2 and 7.—Earlier publication and improvement of the "Agricultural Statistics of India".*—These recommendations were accepted and sanction was given to the additional staff required in the office of the Director-General, Commercial Intelligence and Statistics to cope with the additional work involved.

*Recommendation 4.—Crop forecasts.*—The Government of India have agreed to revive the practice of issuing forecasts in leaflet form and the necessary instructions have been issued. As regards the translation of forecasts into the vernaculars it has been decided that the Director-General, Commercial Intelligence and Statistics should supply copies of the All-India forecasts in leaflet form to Local Governments, etc., who will, at their discretion, publish vernacular translations or arrange for publicity through the medium of the vernacular press.

*Recommendation 8.—Distinctions in reports on education between urban and rural areas and adoption of a uniform classification of schools.*—Instructions have been issued for the collection of separate figures for rural and urban areas. The question of securing some measure of uniformity in the classification of schools in British India was referred to local Governments but on account of diversity of opinion among them it was decided to place it before the Central Advisory Board of Education when it was revived. The question of the classification of schools was accordingly brought to the notice of the Central Advisory Board of Education at its first meeting held in December 1935. But, in view of the fact that a wide scheme of educational reconstruction was under consideration in certain provinces, it was considered premature for the Board to pass a resolution on this complicated problem. The Board, however, passed an important resolution on the general question of school reconstruction, which has since been forwarded to local Governments for consideration.

CHAPTER XVIII.—Statistics—*contd.*

*Recommendation 16.—Statistics of tea production.*—The Government of India will give careful consideration to any request from the tea trade for the introduction of legislation with a view to improve the statistics of tea production.

*Recommendation 17.—Statistics of coffee.*—The main ground for this recommendation was the incompleteness of the statistics of coffee in that they did not include figures relating to plantations of less than ten acres each. After consultation with the Government of Madras (who were also asked to obtain the views of the United Planters' Association of South India), the Chief Commissioner, Coorg and the Resident in Mysore, instructions were issued that a start should be made by collecting statistics for plantations between five and ten acres but that these should be shown in the returns separately from the statistics for plantations of ten acres and over.

*Recommendations 18 and 19.—Improvement of the Jute crop statistics.*—It is proposed to refer these recommendations to the Central Jute Committee when it is formed.

*Recommendation 21.—Statistics of inland trade.*—A scheme for the compilation of Inland Trade (Rail and Riverborne) Statistics which was drawn up in 1931, but had to be held in abeyance owing to financial stringency, was put into operation with effect from 1st April 1933.

*Recommendation 22.—Collection of Statistics of the trade on the main roads crossing the frontiers of India.*—The Government of India were unable to accept the recommendation.

*Recommendation 24.—Holding of the quinquennial census of live stock simultaneously throughout India.*—This recommendation was accepted and the necessary instructions were issued to Local Governments, etc.

*Recommendation 25.—Uniformity of classification in the cattle census.*—The question of uniformity of classification was considered by the Animal Husbandry Wing of the Board of Agriculture in February 1933 which appointed a subcommittee to go into details. The recommendations of this Committee, which were approved by the Advisory Board of the I. C. A. R., were referred to local Governments, etc., and after consideration of their replies heads were prescribed under which returns should be made, and local Governments were asked to adopt this classification for the quinquennial census held in January 1935.

*Miscellaneous.*—In the fourth sub-paragraph under paragraph 525 of their report, the Royal Commission recommended that indigo statistics should be omitted from the volume of "Estimates of Area and yield" as this crop could no longer be regarded as one of the principal crops of India. This recommendation was accepted and instructions were issued for the discontinuance of the indigo forecasts but it was decided that the estimates of area and yield of this crop should be included in Supplementary Table No. 18 of the "Area and Yield" volume.

56. *Application of mathematics to agricultural research.* (*Recommendation 32—paragraph 538.*)—Dr. B. A. Keen, late Director of the I. I. of A. R., who was asked for his views recommended the abolition of the post of Agronomist which already existed on the staff of the Institute, and the creation in its place of a class II post of Statistician with high qualifications in mathematics whose main duty would be to apply statistical methods to field experiments. The proposal was accepted and a Statistician was appointed in 1933.

57. *Constitution of a separate Department of Statistics.* (*Recommendations 34-35—paragraph 539.*)—The Royal Commission recommended that the present statistical organization of the Government of India should be strengthened by the appointment of a statistician of first rate ability as head of a separate Department of Statistics. They held that the appointment of this officer should precede any changes in the present arrangements for statistical work but

Chapter XVIII—Statistics—*concl.*

expressed the hope that, as a result of his appointment, a Bureau of Statistical Information would be created with the administration of which leading economists, scientists and business men would be closely associated.

Certain schemes for the expansion and improvement of economic statistics have been given effect to. It was also decided in connection with the question of the development of an economic organisation at the headquarters of the Government of India to open a new branch of the Commercial Intelligence and Statistics Department at headquarters to carry out more specialised statistical investigations leaving routine work to be performed as hitherto at Calcutta. A Statistical Research Branch was accordingly established at headquarters in July 1933 on a temporary basis and the present sanction lasts up to the end of February 1937. The future of the Branch is dependent on the decision to be reached on the question of creating a Central Economic Intelligence Organisation at headquarters which is under separate examination.

58. *International Institute of Agriculture, Rome. (Recommendation 36, paragraph 540.)*

A qualified Statistician has been appointed to the staff of the Imperial Council of Agricultural Research and full use is made of the statistics compiled by the International Institute of Agriculture, Rome. India took part in the world census of agricultural production, 1931, to the extent that her existing system of statistics permitted.

India continues to adhere to the International Institute of Agriculture, Rome, and is represented on the Permanent Committee of the Institute, which now meets quarterly at Rome, by the High Commissioner for India.

## CHAPTER XIX.—Agricultural Services.

59. *Placing of officers of the Indian Agricultural service and of the Superior Provincial Agricultural services on an age for age equality with officers of other services of similar standing. (Recommendation 19—paragraph 555.)*

The Royal Commission suggested that officers of the I. A. S. and future class I officers of the Provincial Agricultural Services should be placed as far as possible on an age for age equality of pay with services of a like standing, such as the Educational and Forest Services. A request to this effect made by I. A. S. was turned down in 1922 and again in 1926. The question was however re-examined by the Government of India with reference to the I. A. S. but they did not consider that there was sufficient justification for re-opening it since as the result of the recommendations of the Public Services (Lee) Commission this Service would gradually disappear. In so far as the Provincial Agricultural Services were concerned it rested with the Local Governments to decide whether the recommendation of the Royal Commission should be accepted.

60. *Relations of Research Workers in India with Research Workers abroad. (Recommendation 23—paragraphs 558-559.)*

The question was discussed at a meeting of the Advisory Board of the Imperial Council of Agricultural Research in June 1930. It was resolved that while workers from abroad should be welcomed in institutions in India on due notice being given of their intended visit, it would not ordinarily be possible to arrange for exchange of workers from India owing to the paucity of staff.

The whole-time officers of the Imperial Council of Agricultural Research are encouraged to pay visits to the Imperial Bureaux in the United Kingdom while on leave (or deputation). The Vice-Chairman of the Council visited several stations in the United Kingdom and in the Near East in 1930. The Expert Advisers visited the various bureaux in 1931, 1932 and 1934 as opportunity arose.

CHAPTER XIX.—Agricultural Services—*contd.*61. *Central Agricultural Service. (Recommendations—32—45—paragraphs 563—566.)*

*Recommendation 32. Constitution of the Staff of the Pusa Institute and its sub-stations into a Central Agricultural Research Service.*—In accordance with the general principles decided upon for the classification of services under the Civil Services (Classification, Control and Appeal) Rules, the posts at the Imperial Institute of Agricultural Research and its sub-stations, other than those which are borne on the cadre of the I. A. S., have been included in General Central Service, Class I.

*Recommendations 33 and 35-38. Composition and recruitment of the staff at Pusa.*—In 1932 the Sugarcane Expert at Coimbatore and the Imperial Dairy Expert were given the status of Heads of Sections. Candidates for the posts of Heads of Sections, as for other class I posts at Pusa and its sub-stations, are recruited through the Public Service Commission. In the case of posts which are borne on the cadre of the I. A. S. advertisements are issued both in England and in India. For other posts recruitment is restricted in the first instance to India, and only when a suitable candidate is not available in India recourse is had to recruitment in England. Officers already in Government service, whether employed under the Central Government or Provincial Governments, are eligible to apply. Appointments to permanent posts are made on a permanent basis.

*Recommendation 34. Strengthening of the staff of class I officers.*—The question of re-organising the Imperial Institute of Agricultural Research was held over until the arrival of Dr. B. A. Keen, of the Rothamsted Experimental Station, who was selected by the Secretary of State as Director of the Institute. The proposals submitted by Dr. Keen for additional expenditure could not be carried out owing to the financial stringency which then prevailed. On the contrary some reductions had to be made in the staff. Subsequently, owing to the earthquake of 1934 and the consequent decision to shift the Institute to New Delhi, it was not considered feasible to create new posts till the Institute was established on its new site. Now that this is within sight the Director has been asked to submit a programme of new expenditure one of the main items of which will be to implement the above recommendation of the Royal Commission.

*Recommendation 39. Pay of the Director.*—Please see the remarks against item 2. Dr. B. A. Keen who was engaged temporarily on contract was given a pay of Rs. 2,500 p. m. *plus* overseas pay of £13 6s. 8d. The present pay of the Director who holds the post permanently is Rs. 2,000—50—2,250 *plus* if of non-Asiatic domicile overseas pay £13 6s. 8d.

*Recommendations 40 and 41. Pay of Heads of Sections and Class I posts.*—In the course of the general revision of the scales of pay of the services the pay of General Central Service Class I posts at the Pusa Institute and its sub-stations has been fixed, for new entrants, at Rs. 275—300 (probationary period)—325—25—650 (E. B.)—35—1,000 *plus* special pay of Rs. 150 for Heads of Sections. Officers of the Indian Agricultural Service appointed to posts in the Institute draw pay at the rates of pay of that Service. The initial pay of the selected candidate is fixed at the discretion of Government at a point in the scale in accordance with his qualifications, experience and age, and if he is already in permanent government service the substantive pay drawn by him at the date of his appointment is taken into consideration.

*Recommendation 42. Employment of class I officers on a provident fund basis.*—This has been accepted.

*Recommendation 43. Designation of class II officers.*—The designation of class II officers has been changed although not on the lines recommended by the Royal Commission. The designations: lecturers, demonstrators, etc., recommended by the Commission were open to the objection that they conveyed the idea that these officers were devoting most of their time to teaching; on the contrary research forms their main duty. The designations "First Assistant to the Imperial Mycologist", "Second Assistant to the Imperial Entomologist", etc., have been changed to "Assistant Mycologist", "Second Assistant Entomologist", etc.

*Recommendations 44 and 45. Pay of Class II posts and tenure of appointment.*—For class II posts the revised rate of pay for new entrants is Rs. 200—15—350 (E. B.)—20—650. Initial pay is fixed as in the case of class I posts. Provincial Service officers drawing pay in the Provincial Service scale of Rs. 250—750 when appointed to class II posts come on to the scale of

CHAPTER XIX.—Agricultural Services—*concl'd.*

Rs. 250—250—300—20—600—E. B.—25—800 on the stage next above their Provincial Service scale plus Rs. 50. Recruitment is made through the P. S. C. and appointments to permanent posts are made on a permanent basis.

62. *Cost of visits paid by the Pusa staff to the provinces. (Recommendation 46—paragraph 567.)*

The Royal Commission suggested that the cost of visits paid by the members of the Central Agricultural Research Service to the provinces, whether in the course of their ordinary work or to assist in dealing with a specific problem, should be regarded as part of the normal expenditure of the Pusa Institute. It has been decided that when any cases of the character discussed by the Royal Commission arise in future, they should be disposed of in the light of the recommendation of the Commission and the head of the Institute has been instructed accordingly.

## CHAPTER XX.—Miscellaneous.

63. *Agricultural Organisations in minor administrations. (Recommendations 1—5—paragraphs 572-573.)*

The recommendations were referred to the Heads of Minor Administrations. It was reported by the Chief Commissioner, Delhi, that the Agricultural and Veterinary staff of the Delhi province worked under the supervision of the Punjab officers in technical matters and that the proposals formulated in the Punjab on the recommendations of the Royal Commission on Agriculture will eventually be applied to Delhi. The Chief Commissioner, Baluchistan, recommended the appointment of an Agricultural Officer and this proposal was sanctioned. Sanction was also given to the appointment of a small subordinate staff. In the N. W. F. P. (which was then a minor administration) a post of Extra Assistant Director of Agriculture and four posts of Agricultural Assistants were sanctioned, while for the development of the Civil Veterinary Department a sum of Rs. 15,000 was provided in 1931-32 to meet the cost of four additional Veterinary Assistant Surgeons, equipment, etc., and for grants in aid to district boards for cattle breeding. In order to ensure the staffing of the subordinate veterinary service by qualified men a number of scholarships were sanctioned to enable candidates from this province to undergo a course of training at the Punjab Veterinary College, Lahore. A grant of Rs. 5,600 per annum for a period of three years was sanctioned to facilitate the agricultural development of Manpur Pargana, an isolated area in the Central India Agency 49 square miles in extent and with a population of 4,565 persons (mostly Bhils). This scheme was however subsequently abandoned as a measure of retrenchment as it was felt that in this particular case no adequate return could be expected from the outlay. The Chief Commissioner, Ajmer-Merwara was informed that the Government of India were in complete agreement with his view that the first essential was that Ajmer-Merwara should have a qualified agricultural officer of its own and should develop a programme of expansion in conformity with his advice after he had gained local experience and studied the somewhat peculiar conditions of the province. It was suggested that efforts should be made to obtain a suitable senior officer of the provincial agricultural service for this purpose. No action could however be taken on this suggestion owing to continued financial stringency. The question of the development of the agricultural and veterinary organisations in Ajmer-Merwara is now again under consideration. Proposals were received for the reorganisation of the agricultural department in the Andamans but owing to financial stringency they could not be proceeded with.

In connection with the general question of supervision over agricultural and veterinary organisations in minor administrations the Royal Commission recommended that the Director of Agriculture and the Director of Veterinary Services of the neighbouring major province should be appointed advisers to the head of the minor province concerned and should visit that province occasionally. The Government of India after careful examination of this recommendation came to the conclusion that, except in the special case of the Delhi province (and also of N. W. F. P. which, however, is no longer a minor administration) the arrangement proposed was open to the objection that it would be impossible for the Director to devote sufficient attention to the needs of the minor province and was not therefore suitable. Minor Administrations already had the

CHAPTER XX. Miscellaneous—*contd.*

fullest liberty to ask assistance of the experts of the Imperial Institutes at Pusa and Muktesar and of the I. C. of A. R. The Government considered that this provided all the assistance the minor administrations required in dealing with their agricultural and veterinary problems. The minor Administrations were informed accordingly.

64. *Co-operation of Indian States in agricultural (including veterinary) and co-operative matters (Recommendation 9—paragraph 575.)*

Several Indian States have realised the utility of a central organisation such as the Imperial Council of Agricultural Research, which will bring them into touch with the activities of the Agricultural and Veterinary Departments in British India. The States of Hyderabad, Mysore, Baroda, Kashmir, Travancore, Bhopal and Cochin have already secured membership of the Council and have made suitable donations to its funds. Several other Indian States are also represented on the reconstituted Board of Agriculture and Animal Husbandry in India and on the Indian Central Cotton Committee. Research grants have been made to Hyderabad, Mysore, Baroda and Travancore. The following Indian States have appointed their own agricultural marketing officers and co-operate with the central marketing staff:—Hyderabad, Mysore, Baroda, Kashmir, Travancore, Bhopal, Cochin, Patiala, Jind and Pudukkottai. In addition 220 other States have promised to co-operate, and are giving such assistance in the All-India marketing surveys as their circumstances permit. The co-operation of Indian States in agricultural and Animal Husbandry matters has thus been secured in a large measure.

65. *International Institute of Agriculture, Rome. (Recommendations 13—15, paragraph 578.)*

Please see remarks under item 58. When the Imperial Council of Agricultural Research took over the responsibility for the annual grant to the Institute, the need for a representative on the Permanent Committee became apparent. The High Commissioner for India was appointed Indian representative on the Permanent Committee.

Officers of the agricultural and allied departments are encouraged to visit the Imperial Institute of Agriculture at Rome.

66. *Agricultural Meteorology. (Recommendation 11, paragraph 577.)*

In August 1932, the Imperial Council of Agricultural Research undertook to finance a five year scheme of work on agricultural Meteorology at a cost of Rs. 2,05,000 which was put forward by the Director General of Observatories, Poona, and included detailed study of the "Microclimate" or the meteorological conditions immediately surrounding the growing crop. Three annual progress reports, ending with August 1935, have been considered by the Advisory Board of the Council, which reported that the work done under the scheme is of practical value to agriculture, and that the Agricultural Meteorology Branch should be made a permanent activity of the Indian Meteorological Department. The full co-operation of provincial agricultural departments was secured and they have benefitted by the work of the agricultural meteorological branch.

67. *Imperial Institute, London. (Recommendations 16 and 17—paragraph 579.)*

In paragraph 579 of the report the Commission recommended that wider publicity should be given in India to the facilities offered by the Imperial Institute and suggested that one method of doing this would be by a larger distribution of the quarterly Bulletin issued by the Institute.

A list of institutions in India to which complimentary copies of the quarterly bulletin of the Imperial Institute may be distributed for publicity purposes was prepared and forwarded to the Imperial Institute in 1930 so that the Institute might consider the desirability of sending to the institutions gratis initial copies of the bulletin with a view to extending their sale. A note

CHAPTER XX.—Miscellaneous—*contd.*

regarding the constitution and functions of the Institute was also prepared and forwarded to Local Governments and Administrations for circulation amongst officers of the technical departments under their control and they were asked to furnish the Government of India with a list of such technical officers, who were not on the free distribution list of the bulletin of the Institute, to whom a further distribution of the bulletin might be made with advantage. A consolidated list showing the additional official authorities whom Provincial Governments had suggested for inclusion in the free distribution list of the bulletin, was forwarded to the Institute in 1931, but in view of its financial position the Institute did not find it possible to supply copies free to them but agreed to send them complimentary copies of one issue of the bulletin with an invitation to become regular subscribers. Local Governments and Administrations were informed accordingly on 7th December 1931.

The Royal Commission also recommended that the question of re-organising the Indian gallery at the Imperial Institute and of renewing the subscription for its maintenance should be considered.

The Government of India had already taken up this question before the Royal Commission reported. It was decided in April 1928 that the Indian galleries at the Institute should be regarded as part of the general scheme for the exhibition of Indian products. It was also decided that the exhibits for the galleries should be financed from the publicity grant of the High Commissioner for India which was increased by £200 for this purpose. As a result, many of the exhibits in the Indian gallery were overhauled and brought up to date. At the Imperial Conference held in London in 1930, the financial position of the Imperial Institute came under consideration and it was found that the work of the Institute on the then existing scale could not be carried on unless the contributory Governments of the Empire increased their contributions. The recommendation was that if the extra money required could not be found, the exhibition galleries presented the one field where economy might be least regrettable. The Government of India accordingly agreed to the closing down of the exhibition galleries. They have since discontinued their annual contribution to the Imperial Institute.

APPENDIX (*vide* item 37-A).

No. F-16-M./34.

GOVERNMENT OF INDIA.

IMPERIAL COUNCIL OF AGRICULTURAL RESEARCH DEPARTMENT.

*New Delhi, the 10th January 1935.*

RESOLUTION.

The reports of the Royal Commission on Agriculture in India and the Central Banking Enquiry Committee drew attention to the loss which occurs through the ineffective marketing of agricultural produce and put forward recommendations for improvement. The marketing of agricultural produce being mainly a matter of provincial concern, it is for Provincial Governments to consider what action, if any, they should take on the majority of the recommendations referred to but some are of all-India importance and application. The Central Banking Enquiry Committee pointed out the need for some central agency to advise and assist in co-ordinating provincial activities particularly in the case of agricultural produce intended for export and to give assistance to Provincial organisations by way of advice and research. It further recommended that this task should be undertaken by the Imperial Council of Agricultural Research.

2. Although they had accepted in general the recommendations of the Royal Commission on Agriculture regarding market surveys and the appointment of expert marketing officers in the Provincial Agricultural Departments and had in several instances taken such action in that direction as their finances permitted, Local Governments were in general deterred by financial stringency from making substantial progress. The Government of India, in view of the importance of improved agricultural marketing as an aid to the general economic recovery of the country, came to the conclusion that a stage had been reached where action might usefully be taken to study in detail the all-India aspects of the problem and that substantial expenditure would be justifiable even at a time of financial stringency—if the position of Indian agricultural produce in world markets could be strengthened, and greater advantage taken of the huge internal market for such produce.

3. Accordingly, Provincial Governments were consulted in July 1933, and, on receipt of their replies, the Government of India placed the matter before the Advisory Board of the Imperial Council of Agricultural Research for an expression of opinion. In the light of the replies received from Local Governments the Board unanimously recommended action on the following lines :—

- (a) The first step should be the appointment for a limited period of a highly qualified and experienced Marketing Expert with practical knowledge of the organisation of agricultural marketing in other countries of the Empire. This Officer and the necessary assistants should be on the staff of the Imperial Council of Agricultural Research and should undertake the investigation of marketing problems and formulate schemes for the improvement thereof, make recommendations as regards standard grades for the various commodities and advise local Governments and Provincial Departments of Agriculture generally in regard to agricultural marketing ;
- (b) Attention should be concentrated in the first instance on the principal commodities, and
- (c) Local Governments should be invited to collaborate with the Marketing Expert, if appointed, by appointing provincial marketing officers.

4. The Government of India accepted the view of the Advisory Board and decided that a Marketing Expert should be appointed on the staff of the Imperial Council of Agricultural Research for a period of three years. With the sanction of the Governing Body of the Imperial Council of Agricultural Research, Mr. A. M. Livingstone, a senior official of the Marketing Branch of the English Ministry of Agriculture was accordingly appointed as Marketing Expert on the staff of the Council and took up his duties on the 28th April 1934.



5. The question of agricultural marketing was also discussed at the Provincial Economic Conference held in April 1934 and there was general agreement at the Conference that, of all practicable measures for improving economic conditions, an intensive programme to develop marketing facilities for agricultural products (both Crops and Livestock products) offers the best immediate prospects of substantial results. The Conference was of the opinion that action to be taken to deal with the main marketing problems should include propaganda and the supply of information in external markets regarding Indian products ; the grading, sorting and bulking of the main staple products ; special market organisation for perishable commodities ; information to India's producers of consumers' requirements both in India and abroad ; the planning of production on the basis of quality and demand ; the establishment and development of regulated markets ; the undertaking of market surveys for the purpose of developing a common plan throughout India and the establishment of properly organised ' futures ' markets, commodity exchanges and warehouses.

6. As stated in paragraph 9 of their Resolution no. F-16 (1)-F/34, dated the 5th May 1934, the Government of India decided to proceed on the lines recommended at the Conference which included the following initial steps :—

- (1) The appointment of a Central Marketing Officer and staff by the Government of India.
- (2) The appointment of Provincial Marketing Officers.
- (3) The inauguration of Marketing surveys.
- (4) The appointment of special committees for staple crops.
- (5) Work on grade standards.

These recommendations broadly follow the recommendations of the Royal Commission on Agriculture which were endorsed in general by the Central Banking Enquiry Committee and steps will now be taken to give effect to them.

7. The question of establishing additional crop committees is still under the consideration of Government. In the meantime it has been decided, however, that the other recommendations should be given effect to immediately in accordance with a scheme of work prepared by the Marketing Expert Adviser on the staff of the Imperial Council of Agricultural Research. This work, which will be undertaken by a Central Staff in conjunction with Provincial Marketing Staffs, falls into three main divisions, viz.—

- (i) Investigation work ;
- (ii) Development work ; and
- (iii) Work on grade standards.

The work to be done under these various headings may be summarised as follows :—

#### *A.—Investigation work.*

This will include a series of marketing surveys with immediate reference to the more important commodities grouped as follows :—

- I. *Crops*.—(a) Cereals (wheat, barley and rice), (b) oilseeds (groundnuts rapeseed and linseed), (c) plantation and special crops (tobacco, fibres, and fruit).
- II. *Animal Husbandry Products*.—(a) Dairy products, etc. (milk and butter, eggs and poultry), (b) Livestock, etc. (hides, skins and wool-livestock, meat and fish).

Certain general questions are also included within the scope of the surveys, viz., Regulated Markets, Marketing Organisation, the problems of transportation, storage and preservation of the commodities dealt with, Standardisation of containers, etc.

The marketing surveys when completed will set out in detail the present system of marketing of the commodities concerned, not only in each of the provinces separately but in respect of inter-provincial, inter-state and foreign trade so as to provide an all-India picture of existing conditions and a common basis for future progress. The report on each survey will set out, in precise technical detail, definite suggestions for standard grades, containers, handling,

methods of packing, contract conditions, etc. Without committing either the Central Government or Provincial Governments, these reports will also formulate proposals regarding any improvements in marketing organisation in the various areas which may appear to be necessary and practicable.

The work connected with the execution of these surveys will be shared between the Central and Provincial Marketing Staffs and the planning of the surveys, compilation of data and preparation of the reports will fall mainly on the Central Staff.

#### *B.—Development work.*

For each commodity the programme of development work must obviously depend on the results of the marketing surveys but will usually include the demonstration of any recommendations made as a result of the surveys with the object of informing both producers and traders of consumers' requirements and the popularisation of the recommended standard grades, containers, etc. In some instances some small packing stations may be organised (*e.g.*, for eggs and fruits) to demonstrate the practicability of bulk sorting, grading and packing and the commercial advantages of employing the new standards.

More generally, development work will aim at securing the more extensive use of agreed commodity standards, the elimination of waste and the better organisation of producers for marketing purposes. This work will be done in the provinces and will probably fall mainly on the Provincial Marketing Staffs.

#### *C.—Grade Standards.*

This will be work of a technical character relating to the chemical and physical characteristics of such products as oil-seeds, grains, fruit, etc., and the testing of grading technique and equipment under practical conditions.

8. The Central Marketing Staff will consist of the Agricultural Marketing Adviser, seven Senior Marketing Officers and Marketing Officers and ten Assistant Marketing Officers and these officers will be allotted to commodities and groups of commodities in the manner indicated above. The planning, direction and interpretation of marketing surveys will be the responsibility of the Central Marketing Staff; work will be carried out in close co-operation with the provincial Marketing Officers. As regards Provincial Staff it is hoped that each Provincial Government will endeavour to appoint a Marketing Staff fully adequate to the needs of the province. In view of the urgency of the matter and so that the all-India marketing surveys may be as effective as possible, the Government of India have agreed to make provision from Central funds for a period of 5 years for expenditure by local Governments on a nucleus Provincial Marketing Staff consisting of a limited number of marketing officers of a junior grade. The several Provincial Governments have promised the Imperial Council of Agricultural Research that they will appoint their own Senior Marketing Officer, who will be in charge of the marketing staff working in the Provinces and co-operate in the work with the Central Marketing Staff or make other suitable arrangements for the purpose.

9. As regards finance, the Government of India have agreed, subject to funds being voted by the Legislative Assembly, to meet for a period of 5 years the expenditure on the Central Staff as well as of certain staff in the Provinces. For this purpose the necessary provision will be made for the Central Staff and Provincial Staff separately under a new Head to be opened, *viz.*, "60-A—Agricultural Marketing" in the Budget Estimates of the Central Government. The total grant for the Provincial Staff has been fixed at Rs. 2 lakhs per annum which will be placed at the disposal of the Imperial Council of Agricultural Research in the same manner as other grants made by the Government of India to the Council. Subject to a limit which has been prescribed for each province, the necessary allotments to provinces from this grant will be made by the Council in the same manner as grants for agricultural research schemes.

10. The Central marketing staff will be constituted as an Attached Office of the Imperial Council of Agricultural Research Department with the Marketing Expert Adviser to the Council as the Head of the Attached Office. This office will be called the office of the Agricultural Marketing Adviser to the Government of India and will be subject to the same financial and administrative control as other Attached Offices of the Government of India. It will be established with effect from the 1st January 1935 and will be located permanently at Delhi. The

Marketing Expert and the two Senior Marketing Officers will move, however, between Delhi and Simla with the Imperial Council of Agricultural Research Department of the Government of India. Other Marketing Officers will be allowed to recess in Simla only for a limited period.

11. The Government of India desire to acknowledge the helpful co-operation in the improvement of agricultural marketing already offered by the Indian States which, on their own initiative, are prepared to appoint local officers to co-operate with the Central Marketing Staff. This and the ready response received from provincial Governments to their invitation to examine the all-India aspects of agricultural marketing lead the Government of India to hope that, by a great combined effort, results of substantial benefit to Indian agriculturists will be achieved.

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ORDERED that a copy of the Resolution be communicated to all Local Governments, Administrations and Indian States, the Marketing Expert, Imperial Council of Agricultural Research, all Departments of the Government of India including the Financial Adviser, Military Finance.

ORDERED also that the Resolution be published in the Supplement to the *Gazette of India* for general information.

T. VIJAYARAGHAVACHARYA,

*Vice-Chairman.*



